

**REAL-TIME PROCESS CONTROL FOR  
OPTICAL COMPONENT FABRICATION**

Abstract

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A method and system for controlling the fabrication of an optical device having a given property at a defined wavelength. The method comprises the steps of providing a substrate, depositing a material on the substrate to form a film thereon, and controlling a set of manufacturing parameters as the film is being formed on the substrate to make the optical device. The method comprises the further steps of generating an optical signal having a given wavelength, dithering the wavelength of the optical signal, and applying the dithered optical signal to the film being formed on the substrate to modulate the optical signal. A correlation signal is generated to represent the difference between the given wavelength and the defined wavelength, and that correlation signal is used to  
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15 adjust at least one of the manufacturing parameters to make the optical device with said given property at the defined wavelength.